

METHOD AND MEANS FOR ISOLATING ELEMENTS OF A SENSOR ARRAY

ABSTRACT OF THE DISCLOSURE

A device comprising an array of sensors built on or in a substrate with a semiconducting surface and means for isolating each sensor element from its neighbors. In the case where the sensors are ultrasonic transducer elements, acoustic isolation is provided in the form of trenches between neighboring transducer elements to reduce acoustic crosstalk. The trenches may be filled with acoustically attenuative material. Electrical isolation in the form of semiconductive junctions is provided between neighboring transducer elements to reduce electrical crosstalk. In one example, back-to-back pn junction diodes are formed by ion implantation in zones located between neighboring transducer elements. These types of isolation can be employed alone or together.